

REMARKS

Claims 1-51 remain pending in this case, all of which stand rejected. Claims 1-5, 39, 40, 43, 45-47, 50, and 51 have been presently amended. Based on the foregoing amendments and following remarks, reconsideration and allowance of this application is respectfully requested.

Drawing Objections

The drawings stand object to for failing to be of a sufficient quality to permit examination. Although Applicant believes that the drawings provide the quality necessary to permit examination, to expedite the prosecution of the application, Applicant has submitted herewith substitute drawings in compliance with 37 C.F.R. §1.121(d).

Claim Objections

Claims 2, 5, and 43 stand objected to for containing various informalities. Applicant believes that the Examiner meant to object to claim 3 instead of claim 2. Accordingly, claims 3, 5, and 43 have been amended to correct these informalities. As such, Applicant respectfully requests withdrawal of the objections to these claims.

Claim Rejections-35 U.S.C. §112

Claims 1, 2, 4, 5, 39, 40, 45, 46, 49, 50, and 51 stand rejected under 35 U.S.C. §112, second paragraph, as failing to set forth the subject matter which applicant regards as the invention. Applicant respectfully traverses this rejection, since Applicant has set forth the invention in these claims.

In particular, Applicant disagrees as to the meaning associated with the language “combined language-compiler, as construed by the Examiner. And, Applicant respectfully notes that all indications in Applicant’s specification, drawings, and claims refer to a compiler capable of

compiling a program comprising combined languages (C and Estrel being a specific example, but not generally applicable to any claim unless specifically recited). However, in an effort to provide mutually acceptable claim language, Applicant has removed the hyphen so that the subject claims now read "combined language compiler."

The Examiner has also requested that the claim language "E/C" be changed to "ECL". However, the term "E/C" is fully supported in the specification, which means a Esteral/C hybrid. (See specification, page 9, lines 9-11). ECL language is a specific example of E/C language and need not be specifically claimed.

As such, Applicant submits that claims 1, 2, 4, 5, 39, 40, 45, 46, 49, 50, and 51 do comply with 35 U.S.C. §112, second paragraph, and as such, respectfully request withdrawal of the §112 rejection of these claims.

Claim Rejections-35 U.S.C. §101

Claims 1-46 stand rejected under 35 U.S.C. §101 as being directed to nonstatutory subject matter. Applicant respectfully traverses this rejection, since these claims are believed to be directed to statutory subject matter.

In particular, Applicant respectfully notes that the various claimed aspects of code compilation is not *"an abstract idea that is not tied to a technological art."* In fact, compilation of code and other various operations as claimed are concrete operations that commonly occur everyday and are quite obviously tied directly to computer systems and software development. However, in an effort to devise mutually satisfactory claim language, Applicant has defined that which already exists inherently in each claim, that the combined language compiler is a *"product for a computer system."*

As such, Applicant submits that claims 1-46 do comply with 35 U.S.C. §101, and as such, respectfully request withdrawal of the §101 rejection of these claims.

Claim Rejections-35 U.S.C. §102

Claims 1-3, 39-48 and 50 stand rejected under 35 U.S.C. §102(b), as being anticipated by the publication “Vortex: An Optimizer Compiler for Object-Oriented Languages,” OOPSLA 1996, authored by Jeffrey Dean (“Dean”). Applicant respectfully traverses this rejection, since Dean does not disclose each and every element required by these claims.

In particular, Applicant respectfully traverses the Examiner’s assertion that equates Dean to Applicant’s claimed combined language compiler. Applicant respectfully notes that Dean describes test runs of benchmark programs in a language independent compiler (Vortex). Applicant further respectfully notes that Dean developed Vortex in part, to determine if certain optimizations could be applied to a hybrid language compiler (Dean, Abstract, lines 1-7). However, Vortex is a language independent compiler, not a hybrid language compiler, and Dean does not teach a combined language compiler.

Applicant respectfully asserts that Dean’s language independent compiler means a compiler that performs compilation of programs independent of the language in which the program is written. However, that independence is limited in that the program to be compiled can only be written in any of the specific languages supported by the language independent compiler, and not a combination of those languages. And, Applicant respectfully asserts that Dean does not teach or suggest that Vortex is equipped to compile a combined language.

Dean’s own examples or programs compilable in Vortex are any of the object oriented languages known as Cecil, C++ , Java, and Modula-3 (Dean, Abstract, lines 8-10; Dean,

Introduction, paragraph 3). Further, Dean's test results, noted in various figures in Dean and described throughout Dean's discussion are only related to any one or more of the benchmark programs singularly written in one of the object oriented programming languages, and do not include any programs written in a combination of languages (e.g., Dean's Table 2 describes benchmarks test on at least 14 different programs, each written in one of Cecil, Java, Modula-3, and C++ , and none of the programs are shown as being combined with another language). However, each of independent claims 1, 2, 39, 40, 45-47, and 50 specifically recites a "combined language compiler," which means a compiler capable of compiling programs that include programming in multiple languages.

As to Dean's description of the Vortex infrastructure (page 85, section, 3) which, in relation to Fig. 1, states "Each of the different front-ends does whatever parsing and typing are appropriate for the input language, and then translates the input into the Vortex compiler's intermediate language (IL), ..." Applicant respectfully notes that parsing and type checking are performed in every common compiler, the only difference in Dean is that the parsing and type checking is done for any of several different languages, but not a combined language. Applicant respectfully notes that Fig. 1 illustrates four different language front-ends (Cecil, C++, Modula-3, and Java), but fails to make any indication that the languages are combined prior to input to the front end(s). In fact, Dean describes the front ends and generated code as "Vortex takes the IL representation of the program produced by one of its front-ends and performs a series of analyses and transformations on its way to generating optimized target code" (Dean, page 89, section 3.2, first sentence, emphasis added).

As to Dean's Fig. 1, which apparently shows two paths for code gen (C code gen. and SPARC code gen.), Applicant respectfully notes that Fig. 1 indicates two paths and provides no

suggestion as to whether the traditional optimizations output is split or simply provided to each path.

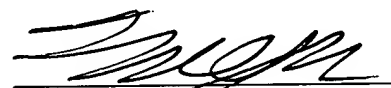
Further, Dean's description is absent any relevant comment on the two paths, and Applicant appropriately refrains from speculating as to its meaning or structure. Further, since Dean is clearly not a combined language compiler, Applicant respectfully notes that any further consideration of the paths is not applicable to Applicant's claimed invention.

Thus, Applicant submits that claims 1-3, 39-48 and 50 are not anticipated by Dean, and as such, respectfully request withdrawal of the §102 rejections of these claims.

Conclusion

Based on the foregoing, it is believed that, with entry of this amendment, all claims are now allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned at (714) 830-0600.

Respectfully submitted,



Michael J. Bolan
Reg. No. 42,339

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Bingham McCutchen LLP
Three Embarcadero Center, 18th Floor
San Francisco, California 94111
CustomerNo. 23639